

REMARKS

The above amendments and these remarks are responsive to the Office Action issued on August 2, 2004. By this response, claims 1, 5-7, 11, 12 and 16-20 are amended and claims 21-25 are newly presented. No new matter is added. Claims 1-25 are now active for examination.

The Office Action

The Office Action dated August 2, 2004 allowed claims 6-8. The Examiner rejected claims 1, 9 and 15 under 35 U.S.C. §103(a) as being unpatentable over Yamaguchi et al. (U.S. Patent No. 5,092,340). Claims 2-5, 10-14 and 16-20 were objected to for depending from a rejected base claim, but the Examiner indicated that the claims would be allowable if they are rewritten into independent form including all of the limitations of the base claim and any intervening claims.

It is respectfully submitted that the rejection is traversed and the objection is addressed in view of the amendments and remarks presented herein.

The Obviousness Rejection of Claims 1, 9 and 15 Is Traversed

(1) Claim 1

Claim 1 was rejected as being obvious over Yamaguchi. By this Response, claim 1 is amended. The obviousness rejection of claim 1 is respectfully traversed because Yamaguchi cannot support a prima facie case of obviousness.

Claim 1, as amended, recites:

A diagnostic system for diagnosing a malfunction during the operation of an instrument that gathers and analyzes real-time data associated with a vehicle, the system comprising:
one or more information-gathering devices for gathering the real-time data associated with the vehicle;
a memory device...for storing the real-time data associated with the vehicle; and
a data replay system...for playing back the real-time data associated with the vehicle after the real time data associated with the vehicle was gathered.

Appropriate support for the amendment can be found in, for example, Figs. 1 and 5, and paragraphs [0025]-[0032] of the written description.

In contrast, Yamaguchi describes an apparatus for measuring a long term electrocardiogram that includes sensor for obtaining electrocardiogram from a person and records the waveforms for analysis by a doctor. The apparatus provides specification or reference data to assist the doctor to determine whether the collected waveform reflects any abnormal condition. Yamaguchi does not teach or suggest a system for gathering and recording real-time data associated with a vehicle, as described in claim 1. Since Yamaguchi fails to teach or suggest every limitation of claim 1, Yamaguchi cannot support a prima facie case of obviousness. The obviousness rejection is untenable and should be withdrawn. Favorable reconsideration of claim 1 is respectfully requested.

(2) Claims 9 and 15

Claims 9 and 15 were rejected as being obvious over Yamaguchi. It is respectfully submitted that the obviousness rejection of claims 9 and 15 is traversed because Yamaguchi cannot support a prima facie case of obviousness.

Claim 9 and 15 relate to system and method for diagnosing a malfunction of an instrument that gathers, records and analyzes real-time wheel alignment data. As discussed above, Yamaguchi describes an apparatus for obtaining a signal from an organism or a living body for analysis. The signals obtained and measured in Yamaguchi's system are associated with a patient, not real-time wheel alignment data as described in claims 9 and 15. Therefore, Yamaguchi does not teach or suggest receiving real-time wheel alignment data from at least one information-gathering device, storing the real-time wheel alignment data in a memory device, and re-playing the stored, real-time wheel alignment data, as described in claims 9 and 15. Since

Yamaguchi fails to teach or suggest every limitation of claims 9 and 15, Yamaguchi cannot support a prima facie case of obviousness. The obviousness rejection of claims 9 and 15 based on Yamaguchi is untenable and should be withdrawn. Favorable reconsideration of claims 9 and 15 is respectfully requested.

The Objection to Claims 2-5, 10-14 and 16-20 Is Addressed

Claims 2-5, 10-14 and 16-20, directly or indirectly, depend on claims 1 and 9, respectively, and incorporate every limitation thereof. Claims 2-5, 10-14 and 16-20 were objected to for depending from a rejected base claim, i.e., claim 1 or 9, but the Examiner indicated that the claims would be allowable if they are rewritten into independent form including all of the limitations of the base claim and any intervening claims.

As discussed above, claims 1 and 9 are patentable. Thus, claims 2-5, 10-14 and 16-20 also are patentable by virtue of their dependencies on claims 1 or 9, as well as based on their own merits.

New Claims 21-25 Are Patentable

New claim 21 describes a diagnostic system for allowing a service technician to diagnose a malfunction during operation by an operator of a wheel alignment system that gathers information in real time about the alignment of a plurality of wheels. The system includes sensors for generating images of a target mounted on each of the plurality of wheels, and a processing system for receiving the images and for generating analysis data based on the images. The analysis data provides an analysis of the alignment of the wheels. A memory device is provided for storing the images or the analysis data, and a display device coupled to the memory device is provided for selectively displaying the images or the analysis data. Appropriate support for the amendment can be found in, for example, Figs. 1 and 5, and paragraphs [0025]-[0032] of the written description.

As discussed above, Yamaguchi relates to an apparatus for obtaining electrocardiogram from a person and recording the waveforms for analysis by a doctor. Yamaguchi does not teach or suggest a system that gathers and records real-time data related to wheel alignment for playback and analysis, as described in claim 21. Thus, claim 21 is patentable.

Claim 22 describes a vehicle service system for allowing a service technician to diagnose a malfunction. The system includes one or more sensors, such as cameras, for generating images associated with a vehicle, and a processing system for receiving the images and for generating analysis data based on the images. The analysis data provides an analysis of geometric parameters associated with the vehicle. A memory device is provided for storing the images or the analysis data, and a display device is provided for selectively playing back the images or the analysis data. Appropriate support for the amendment can be found in, for example, Figs. 1 and 5, and paragraphs [0025]-[0032] of the written description.

As discussed above, Yamaguchi relates to an apparatus for obtaining electrocardiogram from a person and recording the waveforms for analysis by a doctor. Yamaguchi does not teach or suggest a system that gathers and records real-time images for generating analysis data that provides an analysis of geometric parameters associated with a vehicle. Accordingly, claim 22 is patentable over Yamaguchi. New claim 23 is a means-plus-function claim corresponding to claim 22, and thus also is patentable over Yamaguchi.

New claim 24 is a system configured to diagnose a malfunction during the operation of a vehicle test instrument. The system includes means for receiving real-time data associated with the operations of the vehicle test instrument, a memory device for storing the real-time data, and means for re-playing the stored, real-time data. A data processor is provided to analyze the re-played data

to diagnose a malfunction of the vehicle test instrument. Appropriate support for claim 24 can be found in, for instance, paragraph [0015] of the written description.

As discussed above, Yamaguchi describes an apparatus for obtaining a signal from an organism or a living body for analysis. The signals obtained and measured in Yamaguchi's system are associated with a patient, not real-time data associated with the operations of the vehicle test instrument, as described in claim 24. Yamaguchi also fails to teach a data processor for analyzing the re-played data to diagnose a malfunction of the vehicle test instrument, as required by claim 24. Since Yamaguchi fails to teach or suggest every limitation of claim 24, claim 24 is patentable over Yamaguchi.

New claim 25 is directed to a vehicle service system that allows a service technician to diagnose a malfunction. The system includes at least one sensing devices for sensing real-time signals associated with a vehicle or the vehicle service system, and a processing system for generating analysis data that provides an analysis of the vehicle or the operations of the vehicle service system based on the sensed signals. The system further includes a display device, a data storage device for storing the sensed signals or the analysis data, and a storage control device for causing the data storage device to store the sensed signals. A play-back control device is provided to cause the display device to selectively display the sensed signals stored in the data storage device. Appropriate support for the amendment can be found in, for example, Figs. 1 and 5, and paragraphs [0015] and [0025]-[0032] of the written description.

As discussed above, Yamaguchi, the closest reference cited in the Office Action, is directed to an apparatus for obtaining a signal from **an organism or a living body** for analysis. The signals obtained and measured in Yamaguchi's system are associated with a patient, not real-time data associated with a **vehicle** or the operations of the vehicle service instrument, as described in

claim 25. Yamaguchi also fails to teach a processing system for generating analysis data that provides an analysis of the vehicle or the operations of the vehicle service system based on the sensed signals, and a play-back control device for causing the display device to selectively display the sensed signals stored in the data storage device, as required by claim 25. Since Yamaguchi fails to teach or suggest every limitation of claim 25, claim 25 is patentable over Yamaguchi.

For the reasons given above, Applicants believe that this application is conditioned for allowance and Applicants request that the Examiner give the application favorable consideration and permit it to issue as a patent. However, if the Examiner believes that the application can be put in even better condition for allowance, the examiner is invited to contact Applicants' representatives listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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